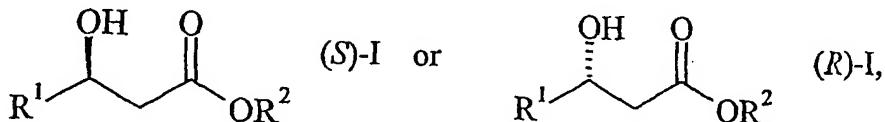


AMENDMENTS TO THE CLAIMS

This Listing Of Claims will replace all prior versions, and listings, of claims in the application.

Listing Of Claims:

Claim 1 (Currently Amended): A process for the preparation of an enantiomerically pure (*S*)- or (*R*)-4-halo-3-hydroxybutyrate (*R*)-4-halo-3-hydroxybutyrate of formula:

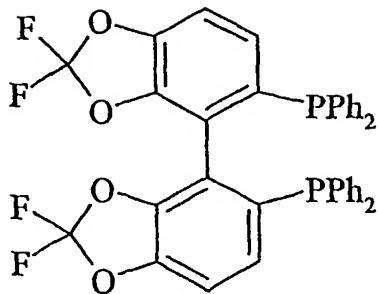


wherein R¹ is CH₂X, CHX₂ or CX₃ and X independently represents Cl and/or Br and wherein R² is C₁₋₆-alkyl, C₃₋₆-cycloalkyl, aryl or aralkyl, each aryl or aralkyl being optionally further substituted with one or more C₁₋₄-alkyl groups and/or halogen atoms, which process comprises the asymmetric hydrogenation of 4-halo-3-exobutyrate a 4-halo-3-oxybutyrate of formula:



wherein R¹, R² and X are as defined above,

in the presence of a catalyst of a ruthenium complex comprising a chiral ligand of formula:



III.

said resultant (S)- or (R)-4-halo-hydroxybutyrate has an enantiomeric purity in the range of an enantiomeric excess (ee) ee of 93.2 percent to an enantiomeric excess (ee) ee of 98.1 percent.

Claim 2 (Previously Presented): The process of claim 1, wherein the ruthenium complex comprising a ligand of formula III comprises at least one diene, alkene or arene or polar solvent molecule as stabilizing ligand.

Claim 3 (Previously Presented): The process of claim 1, wherein the ruthenium complex comprising a ligand of formula III comprises at least one molecule of 1,5-cyclooctadiene or p-cymene as stabilizing ligand.

Claim 4 (Currently Amended): The process of claim 1, wherein the hydrogenation is carried out in a solution comprising a polar solvent selected from the group consisting of C₁₋₄-alcohols, dimethylsulfoxide, dimethylformamide, dimethylformamide, acetonitrile and mixtures thereof, wherein the solvent optionally contains further solvent additives.

Claim 5 (Previously Presented): The process of claim 1, wherein the counterion of the ruthenium complex is selected from the group consisting of Cl⁻, Br⁻, I⁻, BF₄⁻, AsF₆⁻, SbF₆⁻, PF₆⁻, ClO₄⁻ and OTf⁻.

Claim 6 (Previously Presented): The process of claim 1, wherein the ruthenium complex is prepared by mixing the complex of formula $[\text{Ru}_2\text{Cl}_4(\text{cym})_2]$ with the Fluoxphos ligand in a polar solvent.

Claim 7 (Currently Amended): The process of claim 1, wherein the hydrogen pressure during the reaction is in the range of 1 to 60 and

Claim 8 (Previously Presented): The process of claim 2, wherein the ruthenium complex comprising a ligand of formula III comprises at least one molecule of 1,5-cyclooctadiene or *p*-cymene as stabilizing ligand.

Claim 9 (Previously Presented): The process of claim 2, wherein the hydrogenation is carried out in a solution comprising a polar solvent selected from the group consisting of C₁₋₄-alcohols, dimethylsulfoxide, dimethylformamide, acetonitrile and mixtures thereof, wherein the polar solvent optionally contains further solvent additives.

Claim 10 (Previously Presented): The process of claim 3, wherein the hydrogenation is carried out in a solution comprising a polar solvent selected from the group consisting of C₁₋₄-alcohols, dimethylsulfoxide, dimethylformamide, acetonitrile and mixtures thereof, wherein the polar solvent optionally contains further solvent additives.

Claim 11 (Previously Presented): The process of claim 2, wherein the counterion of the ruthenium complex is selected from the group consisting of Cl⁻, Br⁻, I⁻, BF₄⁻, AsF₆⁻, SbF₆⁻, PF₆⁻, ClO₄⁻ and OTf⁻.

Claim 12 (Previously Presented): The process of claim 8, wherein the counterion of the ruthenium complex is selected from the group consisting of Cl⁻, Br⁻, I⁻, BF₄⁻, AsF₆⁻, SbF₆⁻, PF₆⁻, ClO₄⁻ and OTf⁻.

Claim 13 (Previously Presented): The process of claim 10, wherein the counterion of ruthenium complex is selected from the group consisting of Cl⁻, Br⁻, I⁻, BF₄⁻, AsF₆⁻, SbF₆⁻, PF₆⁻, ClO₄⁻ and OTf⁻.

Claim 14 (Previously Presented): The process of claim 9, wherein the counterion of ruthenium complex is selected from the group consisting of Cl⁻, Br⁻, I⁻, BF₄⁻, AsF₆⁻, SbF₆⁻, PF₆⁻, ClO₄⁻ and OTf⁻.

Claim 15 (Previously Presented): The process of claim 2, wherein the ruthenium complex is prepared by mixing the complex of formula [Ru₂Cl₄(cym)₂] with the Fluoxphos ligand in a polar solvent.

Claim 16 (Previously Presented): The process of claim 8, wherein the ruthenium complex is prepared by mixing the complex of formula [Ru₂Cl₄(cym)₂] with the Fluoxphos ligand in a polar solvent.

Claim 17 (Previously Presented): The process of claim 9, wherein the ruthenium complex is prepared by mixing the complex of formula [Ru₂Cl₄(cym)₂] with the Fluoxphos ligand in a polar solvent.

Claim 18 (Previously Presented): The process of claim 14, wherein the ruthenium complex is prepared by mixing the complex of formula [Ru₂Cl₄(cym)₂] with the Fluoxphos ligand in a polar solvent.

Claim 19 (Previously Presented): The process of claim 2, wherein the hydrogen pressure during the reaction is in the range of 1 to 60 bar.

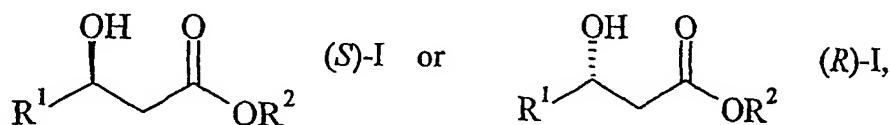
Claim 20 (Previously Presented): The process of claim 8, wherein the hydrogen pressure during the reaction is in the range of 1 to 60 bar.

Claim 21 (Previously Presented): The process of claim 9, wherein the hydrogen pressure during the reaction is in the range of 1 to 60 bar.

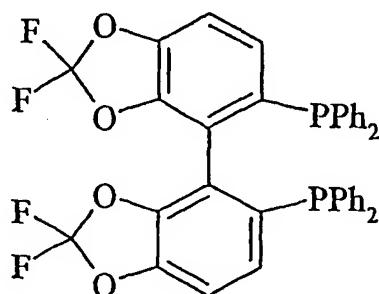
Claim 22 (Previously Presented): The process of claim 14, wherein the hydrogen pressure during the reaction is in the range of 1 to 60 bar.

Claim 23 (Previously Presented): The process of claim 1, wherein the hydrogen pressure during the reaction is in the range of 2 to 35 bar.

Claim 24 (New): A process comprising asymmetric hydrogenating a 4-halo-3-oxobutyrate of formula:



wherein R¹ is CH₂X, CHX₂ or CX₃ and X independently represents Cl and/or Br and wherein R² is C₁₋₆-alkyl, C₃₋₈-cycloalkyl, aryl or aralkyl, each aryl or aralkyl being optionally further substituted with one or more C₁₋₄-alkyl groups and/or halogen atoms, in the presence of a catalyst of a ruthenium complex comprising a chiral ligand of formula:



III.

an enantiomerically pure (S)- or (R)-4-halo-3-hydroxybutyrate of the formula:



wherein R¹, R² and X are as defined above, is prepared,

the resultant (S)- or (R)-4-halo-hydroxybutyrate has an enantiomeric purity of an enantiomeric excess (ee) ee of at least 90 percent.